

Smart Electronics Act

How many electronic devices do you have in your home? How many televisions, computers, iPods, video games, and telephones do you use on a daily basis? Electronic gadgets already account for about 15 percent of household electric consumption, and as these gadgets proliferate, their energy use continues to grow.

Something must be done

The International Energy Agency (IEA) estimates that by 2030, new electronic gadgets will triple their energy consumption to 1,700 terawatt hours, the equivalent of the home electricity consumption of the US and Japan combined. According to the IEA, the international community will have to build over 15,000 wind turbines (or 200 nuclear power plants) to power all the TVs, iPods, PCs and other home electronics expected to be plugged in by 2030. The electric bill to power all household electronics will top \$200 billion a year, compared with last year's bill of \$80 billion. Most of this increase in consumer electronics will occur in developing countries, where economic growth is outpacing developed nations and ownership rates of gadgets are lowest.

This proliferation of electronic devices, if not made more energy efficient, will undermine efforts to increase energy security and reduce the emission of greenhouse gases responsible for global warming. The answer to this problem will not be found in stemming the tide of electronic gadget envy, because there is no way we will be able to do that. Instead, we must encourage the development of better devices that are built more efficiently and run on less energy.

Year	Air conditioners*	Refrigerators*	Clothes washers
'91	0%	-10%	0%
'92	+5%	-30%	-5%
'93	0%	-32%	-15%
'94	-5%	-33%	-20%
'95	-8%	-33%	-20%
'96	-10%	-32%	-20%
'97	-8%	-30%	-20%
'98	-10%	-28%	-18%
'99	-12%	-28%	-20%
'00	-15%	-26%	-22%
'01	-18%	-45%	-22%
'02	-20%	-48%	-25%
'03	-22%	-48%	-30%
'04	-15%	-50%	-55%
'05	-35%	-50%	-60%
'06	-25%	-48%	-58%
'07	-28%	-48%	-70%

Sources: International Energy Agency (per capita consumption and energy use by appliance); Association of Home Appliance Manufacturers (decrease in consumption for some appliances).

Appliance	Percentage
Air conditioning	18%
Lighting	16%
Refrigeration	9%
Water heating	8%
TVs and set-top boxes	7%
Space heating	6%
Clothes dryers	5%
Dishwashers	2%
Freezers	2%
Cooking	2%
Computers	1%
Other, including clothes washers	24%

A horizontal bar chart comparing the power consumption of five different TV technologies. The bars are arranged vertically, with the most powerful technology at the top. Each bar is dark blue with its numerical value in watts displayed at the right end. The technologies and their power consumption are: 42" plasma (newer model) at 275 watts, 46" LCD (newer) at 180 watts, 50" projection (older) at 175 watts, 32" cathode ray tube (older) at 80 watts, and 20" LCD (older)† at 60 watts.

TV Technology	Power Consumption (watts)
42" plasma (newer model)	275
46" LCD (newer)	180
50" projection (older)	175
32" cathode ray tube (older)	80
20" LCD (older)†	60

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